CLAIMS

[0059] What is claimed as new and desired to be protected by Letters Patent of the United States is:

 A method of compressing a series of digital images comprising:

arranging said images in an ordered series from 1 to n wherein n is the last image in said series;

subtracting the value of each pixel of each of images 2 to n from its corresponding pixel in an adjacent image to form subtracted images 2 to n;

adjusting the pixel value to zero for pixels of each of subtracted images 2 to n having absolute values of less than a predetermined threshold value; and

compressing said images of said series 1 to n using a compression algorithm to form compressed images.

2. A method of decompressing the compressed images of claim 1, comprising:

reconstructing the compressed images of claim 1 using an associated decompression algorithm to form thresholded images; and adding each pixel from each of the thresholded images 2 to n with the corresponding pixel in its adjacent reconstructed or original image 1 to (n-1).

The method of claim 1 wherein said adjacent image is a reconstructed image.

4. The method of claim 1 wherein said threshold value is adjusted such that said threshold value is less than a noise tolerance threshold for said pixels of each subtracted image.

- The method of claim 4 wherein said threshold value is adjusted to the maximum possible value that satisfies a normal distribution test for said pixels of each subtracted image.
- 6. The method of claim 1 wherein said digital images are aligned with respect to each other.
- 7. The method of claim 1 further comprising applying a noise reduction filter to one or more images.
- 8. A method of storing images compressed in accordance with claim 1, comprising encoding said images in a storage format and storing said images in a storage medium.
- The method of claim 8, wherein said storage format is selected from the group consisting of AVI, Bitmap,
 DICOM, GIF, TIFF, JPEG, MPEG, or PNG, or Windows Media.
- 10. The method of claim 8, wherein said storage medium is selected from the group consisting of fixed disk drives, magnetic disks, optical disks, magneto-optical disks, random access memory, flash memory, or cache memory.

11. A method of transferring images compressed in accordance with the method of claim 1, comprising encoding said images in a transfer format, providing said images to an image source system, transferring the images from the image source system through an image transfer mechanism to an image receiving system.

- The method of claim 11, wherein said transfer format is selected from the group consisting of TCP/IP, IPX/SPX, NetBEUI, ATM, or 802.11.
- 13. The method of claim 11, wherein said transfer mechanism is selected from the group consisting of network, Internet, telephone line, satellite, wireless, microwave, or fibre.
- 14. A computer system for compressing a series of digital images, the computer system comprising:

a computer processor;

memory for storing a series of digital images; and logic embodied on a computer readable medium, including computer executable instructions for arranging said images in an ordered series from 1 to n wherein n is the last image in said series; subtracting value of each pixel of each of images 2 to n from its corresponding pixel in an adjacent image to form subtracted images 2 to n; adjusting the pixel value to zero for pixels of each of subtracted images 2 to n having absolute values less than a predetermined threshold value to create thresholded images; and compressing

said image 1 and the said thresholded images 2 to n using a compression algorithm to form compressed images.

15. A computer system for decompressing a series of digital images, the computer system comprising:

a computer processor;

memory for storing a series of digital images; and logic embodied on a computer readable medium, including computer executable instructions for reconstructing the compressed images of claim 1 using an associated decompression algorithm to form thresholded images; adding each pixel from each of thresholded images 2 to n with the corresponding pixel in its adjacent reconstructed or original image 1 to (n-1).